Amendments to the Claims:

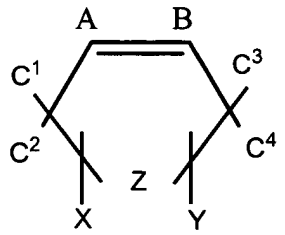
The listing of Claims, as shown in Appendix I attached to this Letter of Response, will replace all prior versions and listings of claims of the present application.

WE CLAIM

1. (Currently Amended) A film comprising at least one layer, the layer comprising an oxygen scavenger composition comprising a transition metal salt, compound or complex and a block copolymer, wherein said copolymer comprises

(A) at least one first prepolymer (P^A) block segment composed of mer units derived from

(a) at least one or a mixture of substituted alicyclic compounds having non-aromatic, ethylenic functionality according to the following representation:



wherein

A, B, C^1, C^2, C^3, C^4 each independently represents hydrogen or a C_qH_{2q+1} hydrocarbyl group with q being an integer in the range of from 0 to 20, provided that either A or B and at least one of C^1, C^2, C^3, C^4 are hydrogen atoms and each carbon atom of the alicyclic ring is fully substituted by groups selected from hydrogen, hydrocarbyl, X groups, Y groups and mixtures thereof;

X and Y each independently or together represents functional groups that is capable of being part of a heteroatom containing linkage forming a covalent bond linkage between the cycloalkenyl containing group and other mer groups forming the first polymer block segment; and

Z being selected from a $-(C_tH_{2t})-$ hydrocarbylene group with t

being an integer in the range from 1-4; and

(b) at least one or a mixture of di- or polyfunctional hydrocarbon compounds according to the following representation:

$$\mathbf{G\text{-}R'(\text{-}G)_x}$$

wherein

R' represents a non-aromatic or aromatic hydrocarbon group; and

each G independently represents a functional group capable of being part of a heteroatom containing linkage between the hydrocarbon group R' and the other mer groups forming the first prepolymer block segment; and x is at least 1: and

(B) at least one second prepolymer (P^B) block segment derived from a monofunctional or polyfunctional polymers represented by the formula

$$\mathbf{P\text{-}(J)_p}$$

wherein

P represents a polymer capable of forming a film and being thermoplastic at temperatures higher than room temperature; and

J represents functional group capable of being part of a heteroatom containing linkage forming a covalent bond linkage between the first prepolymer (P^A) and the second prepolymer (P^B) and p is 1 or 2;

wherein at least one functional group of (P^A) is capable of forming heteroatom containing linkage with functional group J of (P^B), (P^A) is present in from 20 to 80 weight percent and (P^B) is present in from 80 to 20 weight percent of said block copolymer and said ~~block copolymer~~ polymer (P^A) has a T_g of lower than about minus 20°C and said polymer (P^B) has a T_m of higher than +30°C.

2. (Original) The film of claim 1 wherein functional groups X, Y and G of said first prepolymer (P^A) are each independently selected from the group consisting of -$(CH_2)_n$-OH, -$(CH_2)_n$-NH_2, -$(CH_2)_n$-N=C=O and -$(CH_2)_n$-C=O)-D with n being an integer in the range from 0 to 20 and D being selected from a halide atom or an OR group wherein R is an -H or C_1-C_{12} alkyl group, or X and Y together or two G groups together represent –$((CH_2)_n$-C=O$)_x$-D with n being an integer in the range from 0 to 20, D is oxygen atom and x is 2, provided that said functional groups have a molar ratio of (i) hydroxyl and amino functional groups to (ii) carboxylic acid, carboxylic acid ester, carboxylic acid halide and isocyano functional groups of from 0.9:1 to 1.1:1 and sufficient to provide residual functional groups on said first prepolymer.

3. (Original) The film of claim 1 wherein the (a) is selected from tetrahydrophthalic acid, dimethyl tetrahydrophthalate, tetrahydrophthalic anhydride or mixtures thereof.

4. (Original) The film of claim 1 wherein (b) is selected from C_2-C_{20} alkylene glycol or poly(C_2-C_4 alkylene) glycol.

5. (Currently Amended) The film of claim 1 wherein J of the second prepolymer (P^B) is selected from hydroxyl or amino groups or mixtures thereof and wherein the residual functional groups of said first prepolymer (P^A) is selected from -$(CH_2)_n$-N=C=O and -$(CH_2)_n$-C=O)-D with n being an integer in the range from 0 to 20 and D being selected from a halide atom or an OR group wherein R is an -H or C_1-C_{12} alkyl group or X and Y together represent –$((CH_2)_n$-C=O$)_x$-D with n being an integer in the range from 0 to 20, D is oxygen atom and x is 2.

6. (Original) The film of claim 1 wherein J of the second prepolymer (P^B) is selected from $-(CH_2)_n-N=C=O$ and $-(CH_2)_n-C=O)-D$ with n being an integer in the range from 0 to 20 and D being selected from a halide atom or an OR

group wherein R is an -H or C_1-C_{12} alkyl group and wherein the residual functional groups of said first prepolymer (P^A) is selected from hydroxyl or amino groups or mixtures thereof.

7. (Original) The film of claim 1 wherein P of the second polymer (P^B) is selected from C_2-C_4 polyolefins, polyesters, polystyrene, polyamide, polylactic acid, polyalkyllactone and mixtures thereof and P has a molecular weight, M_w, of at least 1000.

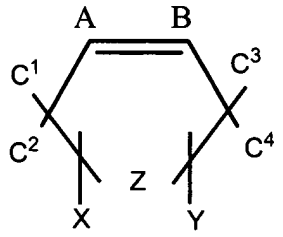
8. (Original) The film of claim 1 wherein P of the block copolymer is derived from beta-propiolactone, beta-butyrolactone, gamma-valerolactone, 1,4-dioxane-2-one, 1,4-dithiane-2,5-dione, trimethylene carbonate, neopentylene carbonate, ethylene oxalate, epsilon-caprolactone, caprolactam, lactide or glycolide or mixtures thereof.

9. (Currently Amended) A laminated product comprising a plurality of layers, including

i) at least one layer, the layer comprising an oxygen scavenger composition comprising a transition metal salt, compound or complex and a block copolymer, wherein said copolymer comprises

(A) at least one first prepolymer (P^A) block segment composed of mer units derived from

(a) at least one or a mixture of substituted alicyclic compounds having non-aromatic, ethylenic functionality according to the following representation:



wherein

A, B, C^1, C^2, C^3, C^4 each independently represents hydrogen or a C_qH_{2q+1} hydrocarbyl group with q being an integer in the range of from 0 to 20, provided that either A or B and at least one of C^1, C^2, C^3, C^4 are hydrogen atoms and each carbon atom of the alicyclic ring is fully substituted by groups selected from hydrogen, hydrocarbyl, X groups, Y groups and mixtures thereof;

X and Y each independently or together represents functional groups that is capable of being part of a heteroatom containing linkage forming a covalent bond linkage between the cycloalkenyl containing group and other mer groups forming the first polymer block segment; and

Z being selected from a $-(C_tH_{2t})-$ hydrocarbylene group with t being an integer in the range from 1-4; and

(b) at least one or a mixture of di- or polyfunctional hydrocarbon compounds according to the following representation:

$$\mathbf{G\text{-}R'(\text{-}G)_x}$$

wherein

R' represents a non-aromatic or aromatic hydrocarbon group; and

each G independently represents a functional group capable of being part of a heteroatom containing linkage between the hydrocarbon group R' and the other mer groups forming the first prepolymer block segment; and x is at least 1: and

(B) at least one second prepolymer (P^B) block segment derived from a monofunctional or polyfunctional polymers represented by the formula

$$\mathbf{P\text{-}(J)_p}$$

wherein

P represents a polymer capable of forming a film and being thermoplastic at temperatures higher than room temperature; and

J represents functional group capable of being part of a heteroatom containing linkage forming a covalent bond linkage between the first prepolymer (P^A) and the second prepolymer (P^B) and p is 1 or 2;

wherein at least one functional group of (P^A) is capable of forming heteroatom containing linkage with functional group J of (P^B), (P^A) is present in from 20 to 80 weight percent and (P^B) is present in from 80 to 20 weight percent of said block copolymer and said ~~block copolymer~~ polymer (P^A) has a T_g of lower than about minus 20°C and said polymer (P^B) has a T_m of higher than +30°C.

; and

ii) at least one layer comprising a material selected from the group consisting of

a) a polymeric article,

b) a paper article, and

c) a metal article.

10. (Original) The laminated product of claim 9 wherein functional groups X, Y and G of said first prepolymer (P^A) are each independently selected from the group consisting of -$(CH_2)_n$-OH, -$(CH_2)_n$-NH_2, -$(CH_2)_n$-N=C=O and -$(CH_2)_n$-C=O)-D with n being an integer in the range from 0 to 20 and D being selected from a halide atom or an OR group wherein R is an -H or C_1-C_{12} alkyl group, or X and Y together or two G groups together represent –$((CH_2)_n$-C=O$)_x$-D with n being an integer in the range from 0 to 20, D is oxygen atom and x is 2, provided that said functional groups have a molar ratio of (i) hydroxyl and amino functional groups to (ii) carboxylic acid, carboxylic acid ester, carboxylic acid halide and isocyano functional groups of from 0.9:1 to 1.1:1 and sufficient to provide residual functional groups on said first prepolymer.

11. (Original) The laminated product of claim 9 wherein the (a) is selected from tetrahydrophthalic acid, dimethyl tetrahydrophthalate, tetrahydrophthalic anhydride or mixtures thereof.

12. (Original) The laminated product of claim 9 wherein (b) is selected from C_2-C_{20} alkylene glycol or poly(C_2-C_4 alkylene) glycol.

13. (Currently Amended) The laminated product of claim 9 wherein J of the second prepolymer (P^B) is selected from hydroxyl or amino groups or mixtures thereof and wherein the residual functional groups of said first prepolymer (P^A) is selected from -$(CH_2)_n$-N=C=O and -$(CH_2)_n$-C=O)-D with n being an integer in the range from 0 to 20 and D being selected from a halide atom or an OR group wherein R is an -H or C_1-C_{12} alkyl group or X and Y together represent –$((CH_2)_n$-C=O$)_x$-D with n being an integer in the range from 0 to 20, D is oxygen atom and x is 2.

14. (Original) The laminated product of claim 9 wherein J of the second prepolymer (P^B) is selected from $-(CH_2)_n-N=C=O$ and $-(CH_2)_n-C=O)-D$ with n being an integer in the range from 0 to 20 and D being selected from a halide atom or an OR group wherein R is an -H or C_1-C_{12} alkyl group and wherein the residual functional groups of said first prepolymer (P^A) is selected from hydroxyl or amino groups or mixtures thereof.

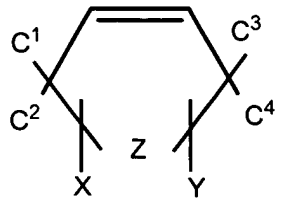
15. (Original) The laminated product of claim 9 wherein P of the second polymer (P^B) is selected from C_2-C_4 polyolefins, polyesters, polystyrene, polyamide, polylactic acid, polyalkyllactone and mixtures thereof and P has a molecular weight, Mw, of at least 1000.

16. (Original) The laminated product of claim 9 wherein P of the block copolymer is derived from beta-propiolactone, beta-butyrolactone, gamma-valerolactone, 1,4-dioxane-2-one, 1,4-dithiane-2,5-dione, trimethylene carbonate, neopentylene carbonate, ethylene oxalate, epsilon-caprolactone, caprolactam, lactide or glycolide or mixtures thereof.

17. (Currently Amended) An oxygen scavenger composition comprising a transition metal salt, compound or complex and a block copolymer, wherein said copolymer comprises
(A) at least one first prepolymer (P^A) block segment composed of mer units derived from

(a) at least one or a mixture of substituted alicyclic compounds having non-aromatic, ethylenic functionality according to the following representation:

A B



wherein

A, B, C^1, C^2, C^3, C^4 each independently represents hydrogen or a C_qH_{2q+1} hydrocarbyl group with q being an integer in the range of from 0 to 20, provided that either A or B and at least one of C^1, C^2, C^3, C^4 are hydrogen atoms and each carbon atom of the alicyclic ring is fully substituted by groups selected from hydrogen, hydrocarbyl, X groups, Y groups and mixtures thereof;

X and Y each independently or together represents functional groups that is capable of being part of a heteroatom containing linkage forming a covalent bond linkage between the cycloalkenyl containing group and other mer groups forming the first polymer block segment; and

Z being selected from a $-(C_tH_{2t})-$ hydrocarbylene group with t being an integer in the range from 1-4; and

(b) at least one or a mixture of di- or polyfunctional hydrocarbon compounds according to the following representation:

$$\mathbf{G\text{-}R'(\text{-}G)_x}$$

wherein

R' represents a non-aromatic or aromatic hydrocarbon group; and

each G independently represents a functional group capable of being part of a heteroatom containing linkage between the hydrocarbon group R' and the other mer groups forming the first prepolymer block segment; and x is at least 1: and

(B) at least one second prepolymer (P^B) block segment derived from a monofunctional or polyfunctional polymers represented by the formula

$$\mathbf{P\text{-}(J)_p}$$

wherein

P represents a polymer capable of forming a film and being thermoplastic at temperatures higher than room temperature; and

J represents functional group capable of being part of a heteroatom containing linkage forming a covalent bond linkage between the first prepolymer (P^A) and the second prepolymer (P^B) and p is 1 or 2;

wherein at least one functional group of (P^A) is capable of forming heteroatom containing linkage with functional group J of (P^B), (P^A) is present in from 20 to 80 weight percent and (P^B) is present in from 80 to 20 weight percent of said block copolymer percent of said block copolymer and said ~~block copolymer~~ polymer (P^A) has a T_g of lower than about minus 20°C and said polymer (P^B) has a T_m of higher than +30°C.

18. (Original) The composition of claim 17 wherein functional groups X, Y and G of said first prepolymer (P^A) are each independently selected from the group consisting of $-(CH_2)_n-OH$, $-(CH_2)_n-NH_2$, $-(CH_2)_n-N=C=O$ and $-(CH_2)_n-C=O)-D$ with n being an integer in the range from 0 to 20 and D being selected from a halide atom or an OR group wherein R is an -H or C_1-C_{12} alkyl group, or X and Y together or two G groups together represent – $((CH_2)_n-C=O)_x-D$ with n being an integer in the range from 0 to 20, D is oxygen atom and x is 2, provided that said functional groups have a molar ratio of (i) hydroxyl and amino functional groups to (ii) carboxylic acid, carboxylic acid ester, carboxylic acid halide and isocyano functional groups

of from 0.9:1 to 1.1:1 and sufficient to provide residual functional groups on said first prepolymer.

19. (Original) The composition of claim 17 wherein the (a) is selected from tetrahydrophthalic acid, dimethyl tetrahydrophthalate, tetrahydrophthalic anhydride or mixtures thereof.

20. (Original) The composition of claim 17 wherein (b) is selected from C_2-C_{20} alkylene glycol or poly(C_2-C_4 alkylene) glycol.

21. (Original) The composition of claim 17 wherein the first prepolymer (P^A) comprises mer units derived from

(a) *cis*-1,2,3,6-tetrahydrophthalic anhydride; and

(b) 1,6-hexanediol.

22. (Original) The composition of claim 17 wherein J of the second prepolymer (P^B) is selected from hydroxyl or amino groups or mixtures thereof and wherein the residual functional groups of said first prepolymer (P^A) is selected from -$(CH_2)_n$-N=C=O and -$(CH_2)_n$-C=O)-D with n being an integer in the range from 0 to 20 and D being selected from a halide atom or an OR group wherein R is an -H or C_1-C_{12} alkyl group.

23. (Original) The composition of claim 17 wherein J of the second prepolymer (P^B) is selected from -$(CH_2)_n$-N=C=O and -$(CH_2)_n$-C=O)-D with n being an integer in the range from 0 to 20 and D being selected from a halide atom or an OR group wherein R is an -H or C_1-C_{12} alkyl group and wherein the residual functional groups of said first prepolymer (P^A) is selected from hydroxyl or amino groups or mixtures thereof.

24. (Original) The composition of claim 17 wherein P of the second polymer (P^B) is selected from C_2-C_4 polyolefins, polyesters, polystyrene, polyamide, polylactic acid, polyalkyllactone and mixtures thereof and P has a molecular weight, Mw, of at least 1000.

25. (Original) The composition of claim 17 wherein P of the block copolymer is derived from beta-propiolactone, beta-butyrolactone, gamma-valerolactone, 1,4-dioxane-2-one, 1,4-dithiane-2,5-dione, trimethylene carbonate, neopentylene carbonate, ethylene oxalate, epsilon-caprolactone, caprolactam, lactide or glycolide or mixtures thereof.

26. (Original) The composition of claim 17 wherein the transition metal salt is selected from the group consisting of cobalt neodecanoate, cobalt 2-ethylhexanoate, cobalt oleate, cobalt acetylacetonate, and cobalt 2-ethylbutyrate.

27. (Original) The composition of claim 17 wherein the composition comprises an effective amount of a photoinitiator.

28. (Original) The composition of Claim 17 wherein the composition comprises a diluent polymer selected from the group consisting of polyester, polyamides, polycarbonates, polyurethanes and polyethers, ethylene polymers or copolymers, acrylate polymers, ethylene-vinyl alcohol copolymer, polypropylene and polypropylene copolymers, styrene polymers and styrene copolymers, vinyl chloride polymer and vinyl chloride copolymers, polyvinylidene polymers and copolymers and mixtures thereof.